60 Inches of Unprecedented Brightness and Stunning High Definition

PNA601
LCD MONITOR

For compelling digital signage in shopping centres, transportation hubs, and more, the PNA601 comes highly recommended. This 60-inch professional LCD monitor offers ultra-high brightness of 2,000 cd/m² for superb visibility—even in brightly lit indoor settings. The PNA601 also provides exceptionally detailed displays via full high definition and delivers everything with the high energy efficiency of an LED backlight and local dimming.

Brilliantly Bright and Visible

With its ultra-high brightness of **2,000 cd/m²**, the PNA601 performs beautifully as eye-catching digital signage in office complexes, hotels, public spaces, shop windows, and many other types of brightly lit interiors. And while the PNA601 can give vivid display to superb-quality images even in sun-washed indoor settings, high contrast makes those brilliant images clearly visible from afar.

Breathtaking Image Quality

The PNA601's exceptional image quality comes from Sharp's own industry-leading LCD technologies. Sharp **UV²A*** technology, incorporated into the 60-inch LCD panel, ensures highly efficient use of light from the backlight and prevents light leakage for the display of truly bright whites, amazingly vivid colours, and extremely deep blacks. And Sharp's **full-array LED backlight**, sporting LED elements evenly positioned across the entire panel, gives PNA601 images remarkably uniform brightness. Even better, the PNA601 boasts 1,920 (H) x 1,080 (V)-pixel **full-HD resolution**, ensuring that none of the detail or visual impact is lost. Thanks to full-HD resolution, everything from fine text to intricate graphics is stunningly crisp and clear.

* UV²A stands for "Ultraviolet-induced Multi-domain Vertical Alignment," a photo-alignment technology that ensures uniform alignment of liquid crystal molecules in a certain direction.

(Image)

High Contrast and Superb Energy Efficiency

The PNA601 owes much of its outstanding black levels, amazing contrast, and superb energy efficiency to **local dimming** of the LED backlight. Local dimming allows specific groups of LEDs to be independently dimmed or brightened for greater control of the darkness and brightness in different areas of the monitor, resulting in considerably reduced power consumption. That's why the PNA601 can deliver significantly better contrast and brightness than conventional LCD monitors while using remarkably less power!

Local Dimming

LED backlight **dimmed**
LED backlight **brightened**

(Image)
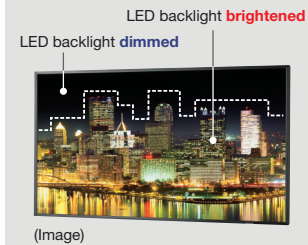
Power Consumption Comparison*

2,000 cd/m² Local dimming: OFF	570W
2,000 cd/m² Local dimming: HIGH	280W **Down by approx. 50%**
(ref) 500 cd/m² Local dimming: HIGH	140W

* Results of Sharp measurements when displaying broadcast content (sub-clause 11.6) stipulated under IEC 62087 Ed. 2.0 and with brightness set to maximum. Note that the power consumption reduction will vary depending on the images displayed.

Note: The images in this brochure are simulated. Depending on the system, additional software/hardware may be required.

Note: The PNA601 is intended for use in indoor environments. If the monitor is installed in a location exposed to excessive direct sunlight such as a windowfront, consult your installer to determine if additional measures to reduce ultraviolet and infrared radiation and ambient temperature are required.

Dual Screen Display

Picture-in-Picture (PIP) mode allows an AV-sourced image to be displayed within a PC-sourced one (or vice versa), while Picture-by-Picture (PbyP) mode puts images from AV and PC sources side by side for split-screen viewing.

• Picture-in-Picture mode

PC display   AV display

• Picture-by-Picture mode

AV display   PC display

Mirror Display Mode (Daisy Chain)

With Mirror Display mode*, the same image can be displayed on a daisy chain of PNA601 monitors for the powerful impact of visual repetition.

* Requires DVI-D cable.

PNZR01 Control Kit (sold separately)

The PNZR01 is composed of a remote control unit and a remote control sensor box. The sensor box can function as a supplementary brightness sensor.

Remote control unit   Remote control sensor box

Crossflow Fan* (option)

A rise in surface temperature on the LCD monitor may hinder proper display. To prevent this from happening, the optional PNZF01 Crossflow Fan spreads a curtain of air across the monitor that keeps the temperature from rising.

* Availability depends on region.

24/7 Operation

The PNA601 is rugged enough for continuous 24/7 operation in demanding professional applications.

Environmentally Friendly Design

The PNA601 conforms to the ENERGY STAR® programme, an international system identifying energy-efficient products, and to the RoHS Directive restricting the use of hazardous substances.

Choice of Installation Mode

The PNA601 offers a choice of **landscape** or **portrait** installation, allowing customers to select the mode that best suits their display content and application.

Enlarge (Zoom) Display Mode

Multiple monitors can be grouped together to display one enlarged image, thanks to Enlarge (Zoom) Display mode*, which corrects the framing of that image to eliminate misalignment between monitors.

* Used with PC and AV signal output on PNA601.

Brightness Sensor

The Brightness Sensor function ensures clear visibility by automatically adjusting backlight brightness to complement surrounding brightness levels. In dark surroundings, backlight brightness automatically lowers, providing optimal viewing and energy savings as well.

In dark surroundings   In bright surroundings

Specifications (tentative)

Model Name		PNA601
Installation		Landscape / Portrait
LCD Panel		60-inch widescreen (152.5 cm diagonal), UV²A LCD
	Max. Resolution	1,920 x 1,080 pixels
	Max. Display Colours (approx.)	1.060 million colours
	Pixel Pitch (H x V)	0.692 x 0.692 mm
	Max. Brightness[1]	2,000 cd/m²
	Contrast Ratio	1,000,000: 1 (local dimming set to HIGH) 5,000: 1 (without local dimming)
	Viewing Angle (H/V)	176°/176° (CR ≥ 10)
	Active Screen Area (W x H)	1,329.1 x 747.6 mm (52 $^{10}/_{32}$" x 29 $^{14}/_{32}$")
	Response Time	6 ms (grey to grey, avg.)
Computer Input	Video	Analogue RGB (0.7 Vp-p) [75 Ω], Digital (conforms to DVI 1.0 standards)
	Synchronization	Horizontal/vertical separation (TTL: positive/negative) Sync-on-green, Composite sync (TTL: positive/negative)
	Plug & Play	VESA DDC2B
	Power Management	VESA DPMS, DVI DMPM
Video Colour System		NTSC (3.58 MHz, 4.43 MHz)[2] / PAL / PAL60 / SECAM
Input Terminals[3]	Standard	PC analogue: Mini D-sub 15-pin x 1[4], HDMI (1080p compatible) x 1[5], 3.5 mm-diameter mini stereo jack x 1, Video[4][6], Component video[4][6], RS-232C: D-sub 9-pin x 1, Control Kit jack x 1
	Via Optional PNZB01 Board	PC digital: DVI-D 24-pin (HDCP compatible) x 1, PC analogue: BNC x 1[7][8][9], Video: BNC x 1[6], S-Video x 1, Component video: BNC (Y, Cb/Pb, Cr/Pr) x 1[6][7], Audio: RCA pin (L/R) x 2
Output Terminals[3]	Standard	Audio: RCA pin (L/R) x 1, RS-232C: D-sub 9-pin x 1
	Via Optional PNZB01 Board	PC digital: DVI-D 24-pin x 1, External speaker: 10W + 10W (6 Ω)
Input/Output Terminals[3]	Via Optional PNZB01 Board	LAN port (10Base-T/100Base-TX)
Mounting		VESA (6 points), 200 mm (7 $^7/_8$") pitch, M6 screw or VESA (4 points), 200 mm (7 $^7/_8$") pitch, M6 screw
Power Supply		100V – 240V AC, 50/60 Hz
Power Consumption		620W
Environmental Conditions	Operating Temperature	0°C to 40°C
	Operating Humidity	20% to 80% RH (no condensation)
Dimensions (W x D x H) (approx.)		1,374 x 147 x 793 mm (54 $^3/_{32}$" x 5 $^{25}/_{32}$" x 31 $^7/_{32}$") (Display section only, not including protrusions)
Weight (not including PNZB01) (approx.)		45 kg (99.2 lbs)

*1 Brightness will depend on input mode and other picture settings. Brightness level will decrease over time. Due to the nature of the equipment, it is not possible to precisely maintain a constant level of brightness.
*2 Requires separately sold PNZB01 Interface Expansion Board.
*3 Use a commercially available connection cable for PC and other video connections.
*4 The mini D-sub 15-pin terminal can be used for PC analogue, video, or component video, all of which are selectable from the menu. When used with a video or component video source, a commercially available conversion cable is required.
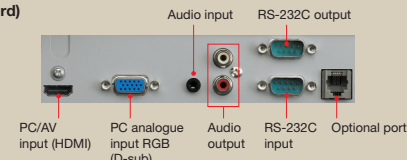*5 For both PC and AV components.
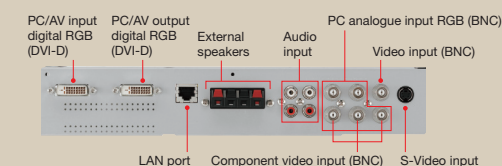
Dimensions
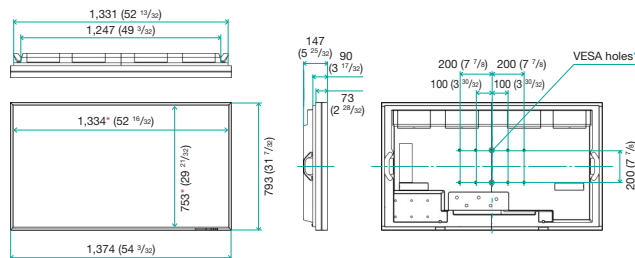
Units: mm (inch)
* Screen dimensions
* To use the VESA-standard mounting bracket, use M6 screws that are 8 to 10 mm plus the thickness of the bracket.

Input/Output Terminals

(standard)

PC/AV input (HDMI) · PC analogue input RGB (D-sub) · Audio input · Audio output · RS-232C input · RS-232C output · Optional port

(option) PNZB01 Interface Expansion Board

PC/AV input digital RGB (DVI-D) · PC/AV output digital RGB (DVI-D) · External speakers · Audio input · PC analogue input RGB (BNC) · Video input (BNC) · LAN port · Component video input (BNC) · S-Video input

Other Options

■ **PNZR01: Control Kit** (remote controller and remote control sensor box*)
  * Functions as an external brightness sensor.

■ **PNZF01: Crossflow Fan***
  * Availability depends on region.

*6 When the PNA601 is equipped with the optional PNZB01 board, either the LCD monitor's standard-equipped video and component terminals or the PNZB01's video and component terminals can be selected for use from the menu.
*7 The analogue and component BNC terminals are switchable. Use the menu to select.
*8 For the proper display of 1,920 x 1,080 images, a separately sold graphics board with appropriate specifications is required. Consult your Sharp representative for more information.
*9 Does not support Plug & Play.
DESIGN AND SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT PRIOR NOTICE.

Sharp Digital Signage Software (option)

Sharp Digital Signage Software is a versatile management software package that provides total support for the creation, scheduling, distribution, and display of a wide range of content for the PNA601.

■ PNSS01 Stand-Alone Version

In stand-alone systems, PNSS01 software enables programmes to be edited on a single PC for display on a single LCD monitor according to a set schedule. Programmes can be transferred to another client* via a USB thumb drive.

Stand-Alone System Configuration

PNSS01 (stand-alone version) · PC (commercially available) for programme editing · LCD monitor
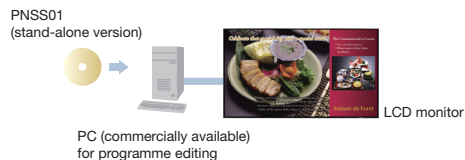
* Each client represents a separate PC and Sharp LCD monitor.
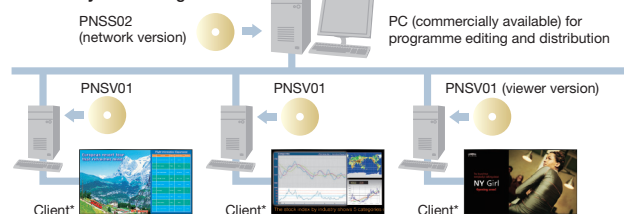
■ PNSS02 Network Version

In network systems, PNSS02 software enables programmes to be edited and stored on a networked PC then distributed via the network to up to 100 clients* according to a set schedule.
Note: Networked clients must use PNSV01 viewer version software

■ PNSV01 Viewer Version

Used on the client* side, PNSV01 viewer software allows programmes edited with PNSS01 or PNSS02 software to be displayed on the client's LCD monitor according to a set schedule.

Network System Configuration

PNSS02 (network version) · PC (commercially available) for programme editing and distribution · PNSV01 · PNSV01 · PNSV01 (viewer version) · Client* · Client* · Client*

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